

RK520-03 Soil Temperature & EC Sensor

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RK520-03 Soil Temperature & EC Sensor is integrated the temperature & EC measurement. The stainless steel probe is inserted into soil surface or soil profile to test quickly. The product with temperature compensation to ensure the accuracy of measurement. The probe can be permanently embedded underground and be connected to a data logger for unlimited testing.

FEATURES

- High accuracy
- Connect directly to data collector or instrument
- Fully sealed structure
- Placed in any depth underground(5000mm,max.)
- Low power design
- Easy Installation

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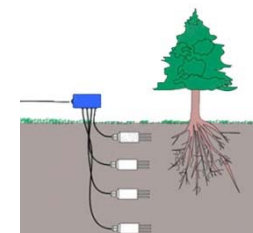
SPECIFICATIONS

Item	Technical Specification	
	Temperature	EC
Range	-30°C-+70°C	0-10mS/cm(0-2V)
Accuracy	±0.5°C	±3%FS
Output Signal	0-2V	
Response Time	<1s	
Supply	5VDC	
Effective measurement	With the center of the probe diameter is 70mm, high 70mm cylinder	
Housing	ABS	
Dimensions	71*45*16mm(probe:3* Ø3*70mm)	
Operating Temperature	-40°C-+80°C	
Ingress Protection	IP68	
Storage	10-60°C@20%-90%RH	
Probe material	316L stainless steel	

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MOUNTING

1. Testing medium should be with uniform intensity.
2. If surface soil water content measurement, the sensor should be insert into soil vertically. Do not shake the sensor when inserted, otherwise the probe will be blended;
3. If multi-layer soil water content measurement, the sensor should be buried in the soil and parallel to the ground. Make sure the probe not be blended;
4. When removing sensors from the soil, please hold the sensor housing shell and do not forcibly pull on the cable. Soil on probes should be brushed tightly.
5. Please keep the sensor in dry & clean conditions.



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ELECTRICAL CONNECTIONS

Connector (cable)	0-2V
Brown	V+
Blue	V-
Black	EC
Gray	Temp.
Shielding layer	

Note: This product has been tested and complies with European CE requirements for EMC directive.

WARRANTY

This product is warranted to be free of defects in materials and construction for a period of 12 months from date of lead time.

Liability is limited to repair or replacement of defective item.

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OUTPUT CHARACTERISTICS

- **Current**

$T = (I-4)/16 * 100 - 30$, (where T = temperature(°C), I = output current(mA))

$EC = (I-4)/16 * 10$ mS/cm((I = output current(mA)))

- **Voltage**

$T = V/V_full\ scale * 100 - 30$, (where T = temperature(°C), V= output voltage(V), V_full scale= 2V)

$EC = V/V_full\ scale * 10$ mS/cm, (V= output voltage(V), V_full scale=2V)


- **RS485**

If the transmission distance is over 100m, please add a 120Ω terminal matching resistances on the front end and back end of bus interface respectively. Attach communication protocol.

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 Complies with applicable CE directives.

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